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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/716,469

11/20/2003

Timothy M. Hsieh

6871

7590  
Timothy M. Hsieh  
9322 Glen Road  
Potomac, MD 20854

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EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/716,469	<b>Applicant(s)</b> HSIEH ET AL.	
	<b>Examiner</b> Martin J. Angebrannt	<b>Art Unit</b> 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

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1. The response of the applicant has been read and given careful consideration. Rejections of the previous office action not repeated below are withdrawn based upon the arguments and/or amendments of the applicant. The JP 04-285737 reference is made of record. The rejection based upon JP 04-277558 is withdrawn.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-25 and 31-35, drawn to an optical recording medium and nominal method of use., classified in class 430, subclass 270.11.
- II. Claims 26-30 and 43-49, drawn to an ocular device (contact lens), classified in class 351, subclass 160R.
- III. Claims 36-38, drawn to a coating composition, classified in class 252, subclass 582.
- IV. Claims 39-42, drawn to method of coating an ocular device by applying the coating to an ocular device, classified in class 427, subclass 162.

The inventions are distinct, each from the other because of the following reasons:

- 3. Inventions group I and group II are directed to unrelated products. The unrelated inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, The articles cannot be used together and function in different modes (one for optical recording and the other for seeing)
- 4. Inventions group I and group III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if

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the intermediate product is useful to make other than the final product, and the species are patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful as a coating for other optical devices or a hard coating for magnetic recording media and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

5. Inventions group I and group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions

The process relates to coating a contact lens, and not to an optical recording medium.

6. Inventions group II and group III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product, and the species are patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful as a coating for other optical devices or a hard coating for magnetic recording media and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

7. Inventions group II and group IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the article may be made by forming the coating on the surface of a mold and then

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contacting the ocular device with the coating and acting as the second surface of the mold.

Alternatively, the mold can be filled with the recited coating, cured and then a resin forming the ocular device is added and cured.

8. Inventions group III and group IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the composition is useful as a coating for other optical devices or a hard coating for magnetic recording media.

9. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

10. During a telephone conversation with Timothy Hsieh on April 4, 2006 a provisional election was made without traverse to prosecute the invention of group I, claims 1-25 and 31-35. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-30 and 36-42 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is a basis for light with a diameter of less than 1.7 microns (see claim 12) but no mention of "1.78  $\mu\text{m}$ ". This is a new matter rejection.

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 20,21 and 23-25 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Takahashi et al. '974.

Takahashi et al. '974 teaches in example 12, a polycarbonate substrate, provided with a reflective layer, a TbFeCo magneto-optic recording layer, a SiN layer and a UV curable acrylate with 50 wt% of 20 nm ITO particles dispersed in it to yield a refractive index of 2.0. [0150]. The use of other ultrafine powders or particles, such as silica, alumina, aluminum nitride, or the like with diameters of 50 nm or less is disclosed. [0082-0084]. The use of magneto-optic, phase change and dye based optical recording media is disclosed. [0069-0071].

The applicant argues that the media of claims 20 are accessed from the substrate side. This is not a limitation found in the claims. **The examiner holds that the inorganic particles are inherently harder than the polymer resin and notes that these are some of the same materials as disclosed in the instant specification, so the applicant's position that they are not is incongruent with the specification.** The examiner notes that only one protective layer is described by the claims, so the arguments regarding specific embodiments disclosed are not commensurate with the scope of coverage sought.

Claim 20 does not require the light to be incident from the substrate side of the recording layer. Clearly the inorganic materials are harder than a polymeric resins. The rejection stands as the arguments are not commensurate with the claims.

17. Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. '974.

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It would have been obvious to use other particles disclosed, such as silica (silicon dioxide), alumina, aluminum nitride or the like, in place of the ITO particles used in the example 12, with a reasonable expectation of realizing the hardness of the coating and forming a useful optical recording medium.

The examiner notes that the claims are not limited to figure 4 of the specification and that the inorganic materials are inherently harder than the organic polymers.

The rejection stands for the reasons above.

18. Claims 20-22 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namba et al. '889.

Example 1, teaches an optical recording medium comprising a PMMA substrate, a dye solution as a recording layer, and a surface coating incorporating a colloidal dispersion of silica having particles sizes of 5-8 nm with ethyl acetate and ethylene glycol. The examples are evaluated using a 830 nm laser.

As the coating is a surface coating, it provides at least some protection against mechanical damage and the colloidal silica is formed in an organic system which includes at least some residue upon drying. The rejection stands.

19. Claims 20 and 23-25 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Kuwahara et al. '633.

Example number 3 in table 1 in column 8 describes an optical recording medium having a substrate, magneto-optical recording layer and a protective layer comprising a UV cured resin with a 20 wt% of a 300 nm carbon particle.



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The rejection should have referred to claims 20-25 and the clearly typographical error is corrected. Were there a requirement relating to transmissivity, the rejection might be obviated.

Claims 21 and 22 are not rejected under this heading and therefore the arguments relating to them are tangential. There is no cogent argument as to why claim 20 is not anticipated by the reference.

20. Claim 20-25 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Takeshima et al. '285.

The examples describes a polycarbonate substrate, a azo dye based recording layer, a reflective layer and a UV curable resin having 50 wt% of silica with a particles size of 10 nm. [0052-0054]. The particles in the ink receiving layer are preferably 2-50 nm, present in an amount of 20-50% and may be oxides of Al, Mg, Zn, Fe, Mn, Ti, minerals or other ceramics. [0025-0028].

The rejection should have referred to claims 20-25 and the clearly typographical error is corrected. As discussed above, the claims do not specify a particular disclosed embodiment, such as the medium being accessed through the protective layer. **The examiner holds that the inorganic particles are inherently harder than the UV cured polymer resin.**

The applicant argues that the layer identified doe nto provide protection. The examiner disagrees, noting that it prevents direct contact with the underlying layers and the presence of the hard particles in the layer. The rejection stands.

21. Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshima et al. '285.

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It would have been obvious to use other materials disclosed such as oxides of titanium, aluminum or magnesium, in place of the silica used in the examples with a reasonable expectation of forming a useful optical recording medium with an ink writable layer.

The rejection should have referred to claims 20-25 and the clearly typographical error is corrected and the rejection stands for the reasons above.

22. Claim 20-25 are rejected under 35 U.S.C. 102(b) as being fully anticipated by JP 04-285737.

JP 04-285737 teaches a substrate, a recording layer, a reflective layer and a UV curable resin which has powdered alumina applied to the surface, followed by the UV curing of the protective layer.

As discussed above, the claims do not specify a particular disclosed embodiment, such as the medium being accessed through the protective layer. The examiner holds that the inorganic particles are inherently harder than the UV cured polymer resin.

As they are embedded at least partially into the layer, the claims are met. The claims do not require that the particles be uniformly distributed or the like and at least some particles are shown in the illustration to be inside the layer. The rejection stands.

23. Claim 1-12 and 31-35 are rejected under 35 U.S.C. 102(b) as being fully anticipated by JP 63-044335.

JP 63-044335 teaches a polymeric optical recording medium substrate which includes SiC, aluminum oxide, tungsten (W) or CF provided with a magneto-optical recording layer (DyNdFeCo), an Al layer and an AlN dielectric (protective) layer. The use of carbon fiber/whiskers is disclosed. (Abstract).

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As the Al layer is atop the recording layer, it is accessed from the substrate side.

The SiC and Aluminum oxide examples illustrated in table 1 anticipate the claimed invention.

24. Claim 1-12,16-19 and 31-35 re rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63-044335, in view of Takahashi et al. '974.

Takahashi et al. '974 teaches that the presence of inorganic particles increases the hardness of the layer, but to reduce scattering these should be less than 50 nm in size. The use of ITO, SnO or the like is also disclosed as reducing static. [0082-0083]. The use of a dispersant is also disclosed [0150]. The use of glass, plastics, polycarbonate or polyolefins as substrate materials is disclosed. [0063]

It would have been obvious to one skilled in the art to modify the examples of JP 63-044335 by using other conductive materials such as ITO and SnO, a dispersing agent, or other substrate materials as taught by Takahashi et al. '974 with a reasonable expectation of forming a useful optical recording medium based upon the use of these materials in optical cording media..

25. Claims 1-19 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63-044335 and Takahashi et al. '974, further in view of Nakao et al. JP 03-263624 and Wilting et al. '497.

Nakao et al. JP 03-263624 teaches a coating containing a metal oxide particles on the backside of the optical recording medium substrate (the side opposite the one that the optical recording medium is applied). The bonding of two optical recording media face to face is also disclosed, so that the backside of both substrates face outward. Dual recording layer media (ie

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two recording layers) inherently have double the capacity of media having only one recording layer.

Wilting et al. '497 teach either the incorporation of particles into the substrate or the provision of a back coating onto optical recording media substrates is known. (embodiment 4 at col 7/lines 60-66).

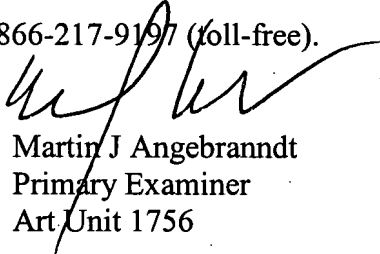
It would have been obvious to one skilled in the art to modify the media rendered obvious by the combination of JP 63-044335 and Takahashi et al. '974 by adhering two of these face to face as taught by Nakao et al. JP 03-263624 to double the recording capacity and/or using other particles known to be useful in forming hardcoats, such as the as silica, alumina, aluminum nitride, or the like with diameters of 50 nm or less disclosed by Takahashi et al. '974 in place of the silica incorporated into the substrate based upon the disclosure of equivalence in the addition of the particles to the substrate material or as a coating by Wilting et al. '497.

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26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J Angebranndt  
Primary Examiner  
Art Unit 1756

10/23/2006